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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,385	02/18/2004	Richard O. Ruhr	E14.2-11416-US01	1927

490 7590 02/20/2007
VIDAS, ARRETT & STEINKRAUS, P.A.
6109 BLUE CIRCLE DRIVE
SUITE 2000
MINNETONKA, MN 55343-9185

EXAMINER

LANG, AMY T

ART UNIT	PAPER NUMBER
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3731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

88

Office Action Summary	Application No.		Applicant(s)	
	10/781,385		RUHR ET AL.	
	Examiner		Art Unit	
	Amy T. Lang		3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 5-8, 31-34, 50, 52-55, 59-63 and 68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-30, 35-49, 51, 56-58, 64-67, 69, and 70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 11/30/2006. In particular, claims 1, 30, 44, 57, and 67. This combination of limitations was not present in the original claims. Thus, the following action is properly made final.

Response to Arguments

Applicant's arguments filed 11/30/2006 have been fully considered but they are not persuasive.

1. Specifically, applicant argues (A) that utilizing a foam destabilizer with C₉-C₁₁ alkoxyated alcohol is critical, as supported by the instant specification.

With respect to argument (A), the instant specification does not provide adequate criticality for the range of a C₉-C₁₁ alkoxyated alcohol. Specifically, example 1 in the instant specification comprises a C₉-C₁₁ alkoxyated alcohol. The only comparative example comprising an alkoxyated alcohol outside this range is comparative example L. This example comprises a C₈-C₁₀ alkoxyated alcohol. However, the composition of example L contains ingredients of sodium alkyl naphthalene sulfonate, chloralyl triazaazoniaadamentane, sodium laureth-13-carboxylate, water (zeolite), and sodium hydroxide which all differ in amounts from example 1. Therefore, comparative example does not only compare the range of alkoxyated alcohol, but also the listed ingredients.

Art Unit: 3731

It is therefore the examiner's position that the data provided in the specification does not provide criticality for only the range of alkoxyated alcohol, but the range of alkoxyated alcohol with the amounts of each listed ingredient.

Additionally, the comparative range of C₈-C₁₀ overlaps in scope with the claimed range of C₉-C₁₁. Therefore, the both example 1 and the comparative example L utilize a C₉ and C₁₀ alkoxyated alcohol. It is therefore the examiner's position that the comparative example does not provide criticality for the C₉-C₁₁ range since it is being compared with a range that overlaps in scope.

2. Specifically, applicant argues (B) that utilizing a foam destabilizer, compared to no foam destabilizer, is critical as shown in comparative examples H, I, and M.

With respect to argument (B), Abe broadly discloses a foam destabilizer (page 6, lines 8-14).

3. Specifically, applicant argues (C) that utilizing the specific C₉-C₁₁ alkoxyated alcohol foam destabilizer is critical as compared to a low foam surfactant.

With respect to argument (C), the comparative example utilizing the low foam surfactant is disclosed as example J. The applicant argues that, as shown in Table 10, example 1 containing the C₉-C₁₁ alkoxyated alcohol foam destabilizer preformed superior to the general low foam surfactant so that criticality for the specific foam destabilizer is provided. However, the composition of example J contains ingredients of proprietary amine based gemini surfactant, chloralyl triaza azoniaadamentane, water

Art Unit: 3731

(zeolite), and sodium hydroxide which all differ in amounts from example 1. Therefore, comparative example j does not only compare the type of foam destabilizer utilized, but also the listed ingredients. Additionally, the amount of C₉-C₁₁ foam destabilizer utilized in example 1 is not the same as the amount of low foam destabilizer utilized in example j. It is therefore the examiner's position that the data provided in the specification does not provide criticality for the specific C₉-C₁₁ alkoxyated alcohol foam destabilizer, but the specific C₉-C₁₁ alkoxyated alcohol foam destabilizer with the amounts of each listed ingredient.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 3731

6. Claims 1-4, 9-13, 15-18, 26-30, 35-40, 42-49, 51, 57, 58, 64, 66, 67, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1).

Abe discloses an aqueous conveyor lubricant comprised of ether carboxylates (page 1, lines 5-10; page 5, lines 34-35). The average degree of ethoxylation of the ether carboxylates is disclosed from 0.3 to 15 (page 4, lines 23-28). The ether carboxylates are further disclosed as having the formula $R-(OCH_2CH_2)_n-OCH_2COO-X$, where R is an alkyl group having 12 to 22, preferably 16 to 18, carbon atoms, n is from 0.3 to 15, and X is hydrogen (page 4, line 30 through page 5, line 7). Therefore, this formula disclosed by Abe clearly overlaps the instantly claimed ether carboxylate. Abe also teaches that X may be sodium or potassium, which are alkali metals, when describing how the ether carboxylates useful in the invention are produced (page 5, lines 16-32).

The lubricant composition comprises the ether carboxylates in an amount from 0.1 to 30 wt%, preferably 1 to 20 wt% (page 6, lines 1-6). Abe also discloses additives in the lubricating composition including a foam inhibitor, a corrosion inhibitor, biocides, which encompasses antimicrobial agents, and surfactants (page 6, lines 8-14). The total lubricating composition is diluted with water to a concentrate of 0.01 to 2 wt% (page 6, lines 20-27).

The lubricant composition disclosed by Abe is used to lubricate a belt conveyor, equipped with a sprayer system (page 1, lines 14-18). The continuous spraying of the conveyor belt with the disclosed lubricant teaches a method of lubricating a conveyor

Art Unit: 3731

system (page 8, lines 1-3). Since the conveyor belt is continuously sprayed, it intrinsically has a plurality of spray nozzles along the conveyor system.

Abe does not specifically disclose the specific surfactants utilized in the lubricating composition.

Li also discloses a lubricant for conveyor systems (column 1, lines 8-12). This composition is further disclosed as containing a surfactant to increase detergency and lubricity (column 6, lines 59-67). Suitable surfactants include alkoxyated alcohols having 8 to 24 carbon atoms (column 7, lines 18-25). Although Li teaches that ethoxylated alcohols are preferred, the disclosure of the invention is broad enough to encompass propoxylated alcohols.

Since Abe is silent as to the specific surfactants utilized in the conveyor lubricant composition and Li discloses that C₈ to C₂₄ alkoxyated alcohols are advantageous by providing increased detergency and lubricity, it would have been obvious for Abe to also utilize the surfactants disclosed by Li. Furthermore, although Li does not specifically disclose the alkoxyated alcohols as foam destabilizers, they would intrinsically function as such in a lubricating composition.

7. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1) and Behler (US 4,894,485).

The combination of Abe and Li, as discussed in paragraph 4 and incorporated here by reference, discloses a conveyor lubricant comprised of ether carboxylates with 0.3 to 15 moles of ethoxylation.

Art Unit: 3731

The combination of Abe and Li does not disclose the mixture of using both ether carboxylates that are ethoxylated and propoxylated.

Behler discloses an ether carboxylate formed by ethylene oxide or propylene oxide or by the mixture of ethylene oxide and propylene oxide (column 2, lines 23-61). This corresponds to the ether carboxylate as being ethoxylated, propoxylated, or both. Therefore, Behler teaches the mixture of both ethoxylated and propoxylated ether carboxylates.

Since Abe discloses ethoxylated ether carboxylates, each from 0.3 to 15 moles, and Behler teaches that it is known in the art to combine ethoxylated and propoxylated ether carboxylates in a mixture, it therefore would have been obvious for Abe to use a combination of the two in the lubricating composition. Furthermore, since Abe independently teaches the mole range of each from 0.3 to 15, it would have been obvious for Abe to also use the combination with 5 moles of ethoxylated ether carboxylates and 2 to 10 moles propoxylated ether carboxylates.

8. Claims 19-22, 23, 24, 41, 56, 65, and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1) and Person Hei (US 5,723,418).

The combination of Abe and Li, as discussed in paragraph 4 and incorporated here by reference, discloses a conveyor lubricant comprised of ether carboxylates and additional additives.

Abe does not specifically disclose (i) an ether amine or diamine additive or (ii) a dicarboxylic acid corrosion inhibitor in the lubricating composition.

With respect to (i) above, Person Hei discloses a lubricating composition for use on conveyor systems (column 1, lines 6-18). The composition comprises an amine compound of formula $R_1-O-R_2-NH_2$ or $R_1-O-NH-R_3-NH_2$, where R_1 is a linear C_6-C_{18} , R_2 is a linear C_1-C_8 alkyl, and R_3 is a linear or branched C_1-C_8 alkyl group (column 2, lines 14-26). Either compound, when utilized in a conveyor lubricant, is shown to provide lubricity, antimicrobial character, and reduction in formation of precipitates (column 2, lines 60-67). Person Hei also discloses the ether amine as a mixture of tetradecyloxypropyl-1,3-diamino propane and dodecyloxypropyl-1, 3-diaminopropane utilized in the conveyor lubricant (Table 3, column 7, where C_{12} overlaps dodecyl). When the lubricant comprising this compound was subjected to a mild steel corrosion inhibition test, no visible signs of corrosion were produced (column 7, lines 24-50). Therefore, this compound is advantageous to a conveyor lubricating composition.

Since the scope of Abe is open to various additives and Person Hei discloses an amine additive with many advantages in a conveyor lubricant, it would have been obvious for Abe to also utilize the amines disclosed by Person Hei. Furthermore, although Person Hei does not specifically disclose the amines as a corrosion inhibitor, they would intrinsically act as one in a lubricating composition.

With respect to (ii) above, Person Hei discloses a dicarboxylic acid corrosion inhibitor, specifically adipic or glutaric, which overlap the instantly claimed formula (column 4, lines 18-21). These specific corrosion inhibitors, when utilized in a conveyor

lubricant, were shown to provide corrosion protection against mild steel and acted as an amine neutralizing agent to benefit production cost and efficiency (column 8, lines 5-29). Therefore, since Abe is silent as to the specific corrosion inhibitor and Person Hei discloses a specific corrosion inhibitor with various advantages in a conveyor lubricant, it would have been obvious for Abe to also utilize the dicarboxylic acid corrosion inhibitor.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1), Person Hei (US 5,723,418), and Login (US 4,395,373).

The combination of Abe, Li, and Person Hei, as discussed in paragraph 6 and incorporated here by reference, disclose a conveyor lubricant comprised of ether carboxylates. Other additives are included in the composition including corrosion inhibitors, foaming agents, and chelating agents (page 6, lines 8-14 of Abe).

Abe is silent as to the specific additives utilized in the lubricant composition, Login discloses that phosphated amine oxides can be used as corrosion inhibitors, foaming agents, and chelating agents (column 9, lines 15-22). Therefore, since Abe is silent as to the specific additives and Login discloses one compound that can be used for the various additives disclosed by Abe, it would have been obvious for Abe to utilize the phosphated amine oxide in the lubricant composition.

Conclusion

Art Unit: 3731

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy Lang whose telephone number is (571) 272-9057. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 3731

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

02/09/2007

Amy T. Lang

ATL


ANH TUAN T. NGUYEN
SUPERVISORY PATENT EXAMINER

2/14/07